

IN THE CLAIMS:

1. (Currently Amended) A token dispensing ~~device~~ system, comprising:

a plurality of tokens of a predetermined diameter;

a storing bowl for storing and conducting the plurality of tokens, the storing bowl including an upper section that is open to receive the tokens and a lower section that is open to discharge the tokens of ~~[[a]]~~ the predetermined diameter, the lower section having a convex section circular opening of a diameter between approximately 3 and 5 times the predetermined diameter of the tokens for restricting the movement of tokens from the upper section into the lower section to intentionally create a quasi-jamming condition of tokens bridging over the circular opening of the lower section when the storing bowl is approximately full of tokens;

a rotating disk located below the storing bowl lower section, the rotating disk having at least one through hole, the through hole for retaining and moving tokens;

a motor for rotating the rotating disk; and

a base plate located below the rotating disk,

wherein ~~a token~~ one of the plurality of tokens disposed in the through hole of the rotating disk is moved on the base plate by the rotating disk to be dispensed one-by-one and the diameter of the convex section circular opening lessens any force load on the rotating disk.

2. (Currently Amended) The token dispensing ~~device~~ system of Claim 1,

wherein the storing bowl convex section includes

the circular opening is located over the outer edge of the through hole,

a conically tapered section which extends upwards from the circular opening, and

an enlarging section which is horn-like in shape and which extends upwards from the conically tapered section, the enlarging section being located above the conically tapered section,

wherein the junction of the conically tapered section and the enlarging section forms an apex where the convex section has a minimum diameter.

3. (Currently Amended) The token dispensing ~~device~~ system of Claim 2, wherein the apex of the convex section is located above the base plate at a distance approximately equal to the diameter of a token.

4. (Currently Amended) The token dispensing ~~device~~ system of Claim 3, wherein a space is enclosed by the convex section and the diameter of the convex section circular opening is more than approximately three times the diameter of the ~~token~~ plurality of tokens.

5. (Currently Amended) The token dispensing ~~device~~ system of Claim 4, wherein the storing bowl has left and right side wall members which extend vertically upwards from the enlarging section.

6. (Currently Amended) The token dispensing ~~device~~ system of Claim 5, wherein the rotating disk has a center section which extends upwards a distance above the convex section circular opening, the rotating disk center section for agitating tokens in the token storing bowl.

7. (Currently Amended) A token dispensing ~~device~~ system, comprising:

a plurality of tokens of a predetermined diameter;

a storing member for storing and conducting the plurality of tokens, the storing member including an upper section that is open to receive the tokens and a lower section that is open to discharge the tokens, the lower section having a convex section with a circular opening for restricting the movement of tokens from the upper section into the lower section to create a quasi-jamming bridge condition of tokens when the storing member is approximately full of tokens;

a rotating disk for dispensing tokens one-by-one in a rotating manner, the rotating disk having a first side and a second side, the rotating disk first side being disposed adjacent to the lower section of the storing member, the rotating disk having at least one through hole, each rotating disk through hole having a cone-shaped hollow, each rotating disk through hole for receiving tokens, the rotating disk for rotating about an axis line, the axis line extending in a direction to enter the storing member lower section circular opening;

a base plate located below the rotating disk second side, the base plate being a planar surface adjacent to the rotating disk for supporting one of the plurality of tokens disposed in the through hole as the rotating disk is rotated and a token is dispensed; and

a motor for selectively rotating the rotating disk, the motor having a driven shaft, the driven shaft being operatively coupled to the rotating disk, wherein the ratio of diameter of the plurality of tokens to a diameter of the convex section circular opening is between approximately 3 to approximately 5.

8. (Currently Amended) The token dispensing ~~device~~ system of Claim 7, further comprising:

a gear reduction unit disposed between the motor and the rotating disk, the gear reduction unit for operatively coupling the motor to the rotating disk so that for every rotation of the motor shaft the rotating disk makes less than one rotation.

9. (Currently Amended) The token dispensing ~~device~~ system of Claim 7, further comprising:

the circular opening being located over the outer edge of the through hole as the rotating disk is rotated;

a first tapered section which narrows in a upwards direction away from the circular opening, the first tapered section being conically tapered; and

a second tapered section which widens in a upwards direction away from the circular opening to form an enlarging section, the second tapered section being mounted above the first tapered section,

wherein the junction of the first tapered section and the second tapered section forms an interior circular apex of the convex section, the interior circular apex defining the most narrow diameter of the convex section.

10. (Cancelled)

11. (Currently Amended) The token dispensing ~~device~~ system of Claim 9,

wherein the ratio of the diameter of the circular opening of the convex section to the ~~diameter of a token~~ respective diameter of the plurality of tokens is approximately 4.3.

12. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein the storing member upper opening describes a substantially horizontal plane and the rotating disk is inclined at a predetermined angle relative to the substantially horizontal plane, the storing member lower circular opening being aligned with the rotating disk.
13. (Currently Amended) The token dispensing ~~device~~ system of Claim 12,
wherein the predetermined angle is approximately 30 degrees.
14. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein the cone-shaped hollow is formed off-center with the center of the through hole, the center of the cone-shaped hollow being off-set by a small amount in the direction of rotation of the rotating disk in order to form a more gradual slope on the leading edge of the through hole and a more steep slope on the trailing edge of the through hole.
15. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein tokens in proximity to the convex section circular opening form a quasi-jamming condition, the quasi-jamming condition being a bridging of adjacent tokens spanning the width of the convex section above the rotating disk.
16. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein the storing member is composed of resin and is formed by injection molding.
17. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein the rotating disk is composed of resin and is formed by injection molding.

18. (Currently Amended) The token dispensing ~~device~~ system of Claim 7,
wherein the base plate is composed of resin and is formed by injection molding.

19. (Currently Amended) In a token dispensing ~~device~~ system having a hopper for storing tokens and a dispenser for dispensing tokens, the hopper having an upper opening and a lower opening, the improvement comprising:

a plurality of tokens of a predetermined diameter;

a convex section disposed in between the hopper lower opening and the dispenser, the convex section configured for impeding the flow of tokens from the hopper to the dispenser by creating a quasi-jamming condition of tokens with a circular opening at an apex of the convex section, the quasi-jamming condition being a bridging of adjacent tokens spanning the width of the convex section above the dispenser, wherein a ratio of a diameter of the tokens to a diameter of the circular opening of the convex section is between approximately 3 to approximately 5.

20. (Currently Amended) The token dispensing ~~device~~ system of Claim 19,

wherein the convex section includes a first tapered section which narrows in a direction away from the hopper lower opening, the first tapered section being conically tapered; and

a second tapered section which widens in a direction away from the hopper lower opening to form an enlarging section, the second tapered section being mounted above the first tapered section,

wherein the junction of the first tapered section and the second tapered section forms the interior circular opening of the convex section, the circular opening defining the most narrow diameter of the convex section.

21. (Currently Amended) The token dispensing ~~device~~ system of Claim 19, further comprising:

an agitator for agitating tokens in the hopper.

22. (Currently Amended) A token dispensing ~~device~~ system, comprising:

a plurality of tokens of a predetermined diameter;

a storing member for storing and conducting the plurality of tokens, the storing member including an upper section that is open to receive tokens and a lower section that is open to discharge tokens, the storing member upper opening ~~describes~~ defines a substantially horizontal plane, the storing member lower section opening being aligned with the rotating disk, a circular lower opening located on the lower section of the storing member, ~~the circular lower opening being located over the outer edge of the through hole as the rotating disk is rotated,~~ the lower section inclined at a predetermined angle and is cylindrical and having a convex section opening adjacent a lowest portion for restricting the movement of tokens from the upper section into the lower section;

a rotating disk for dispensing tokens one-by-one in a rotating manner, the rotating disk inclined at the predetermined angle of the lower section and having a first side and a second side, the rotating disk first side being disposed adjacent to the lower section of the storing member, the circular lower opening being located over the outer edge of the through hole as the rotating disk is rotated, the rotating disk having a cone shaped projection which projects into the lower section over the convex section, the rotating disk having at least one through hole, each rotating disk through hole having a cone-shaped hollow, each rotating disk through hole for receiving only

one token, the rotating disk for rotating about an axis line, the axis line extending in a direction to enter the convex section opening;

a base plate located below the rotating disk second side, the base plate being a planar surface adjacent to the rotating disk for supporting a token disposed in the through hole as the rotating disk is rotated and the token is dispensed; and

a motor for selectively rotating the rotating disk, the motor having a driven shaft, the driven shaft being operatively coupled to the rotating disk;

wherein the ratio of a diameter of the convex section opening to a diameter of ~~a token~~ the plurality of tokens is between approximately 3 to approximately 5.